



HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

NASA TECHNOLOGY INFUSION
ROAD TOUR



AND MINORITY-SERVING INSTITUTIONS

Spelman College

Dr. Claudia Scholz
Assoc. Provost for Research



Office of
Small Business
Mentor-Protégé Program

Spelman College: Curriculum & Highlights

- Degrees offered in:
Biochemistry, Biology, Chemistry, Computer and Information Sciences, Economics, Environmental Science, Dual Degree Engineering, Health Sciences, Mathematics, Physics, Psychology, Sociology and Anthropology
- Top institution of baccalaureate origin of Black women earning PhDs in STEM

Point of Contact:

Dr. Claudia Scholz, Associate Provost for Research

Data Science & Quantitative Biology

- Data Science Initiative
 - Infusing STEM and social science courses with data science content
- Data Visualization
 - Peter Chen: multidimensional spectroscopy to reduce peak congestion
 - Brandeis Marshall: #BlackTwitter Project
 - Jay Nias: 3D printed manifestations of real-time social data
- Partnership with the Broad Institute (Cambridge, Mass.)
 - Mentawab Ayalew: Transcriptome Analysis; Mathematical Modeling
 - Tiffany Oliver: bioinformatics & Genetic Epidemiology
 - Yonas Tekle: Genomics, Transcriptome & Proteomics & the sexual behavior of amoeboid microbes

Capabilities: Climate & Environment

- Guanyu Huang: Multi-scale atmospheric (air quality) modeling
- Nirajan Dhakal: Hydrological Analysis and Modeling, Hydroclimatology, Hydroinformatics
- Bikhari Tharu: Bayesian Analysis, Mixed Models, Longitudinal Data Analysis, Functional Data Analysis, Data Modeling and Analysis
- T. Cássia de Brito Galvão: Geographic information systems to study erosion in Georgia and environmental justice in greater Atlanta

Capabilities: Social & Behavioral Science

- Scholarship of Teaching & Learning
- Angelino Viceisza: economic decision making; experimental economics & random controlled trials; eye-tracking
- Valerie Taylor: experimental social psychology; interracial social interactions; stereotype threat
- Leyte Winfield: blended learning and inclusive pedagogy in chemistry instruction
- Lisa Hibbard: blended learning and student motivation, efficacy and success

Capabilities: Chemical & Materials Science

- Shanina Sanders: Green chemistry, organocatalysis; heterocyclic compounds
- Tameka Clemons: regulation of insulin-degrading enzyme (IDE).
- Kimberly Jackson: food and pharmaceutical chemistry
- Michelle Gaines: Interfacial Surface Chemistry; microgel particles
- Natarajan Ravi: Tuning the bandgap in graphene by intercalation